REMARKS

This Response is in reply to the Office Action rejection mailed on November 27, 2007.

Claims 1, 3, and 5-7 were pending in the application, with each of the claims being rejected.

Claims 1, 3, and 5-7 were rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement because the claims include subject matter not

described in the specification in such a way as to reasonably convey that the inventor had

possession of the invention at the time of application.

Regarding claim 1, the Office Action stated that the limitation of "overriding a previously

established font sharpening threshold and substituting said user-defined font sharpening

threshold" was not disclosed in the specification. Applicant disagrees. On page 3 of the

specification, the Summary states that "When the user selects FONT SHARPENING from the

menu, the user is prompted to enter a value ranging from 0 to 150…Whatever value the user

enters will become the new font sharpening threshold. The default value is 24." (Lines 19-23.)

Since there is a default value, the value entered by the user must necessarily override the

default value. Further, the specification states "the user may **override** the default setting and

set the font-sharpening threshold to a user-defined value through a suitable user interface."

(Page 11, lines 19-29, emphasis added) Thus, the requirements of §112, second paragraph,

are clearly and adequately supported in the specification for this claim limitation.

Claim 1 also includes the limitation "determining whether a halftone screen is to be used

for said text based on an outcome of said comparison." According to the Office Action, this

limitation implies that a halftone screen may not be chosen in some instances, and this

possibility is not included in the specification. Applicant again disagrees. Claim 1 speaks of a

font sharpening **threshold**. Above the threshold, font sharpening is invoked. As stated in the

specification, "[t]he numerical value entered by the user could also be a normalized value that

does not directly correspond to a text value, but which the RIP 12 uses to determine the text

size **at which font sharpening is invoked**." (Page 12, lines 1-3, emphasis added)

Consequently, font sharpening is not invoked below the threshold. Therefore, the Office Action incorrectly implies that some type of halftone screen must be chosen no matter what font size is being printed.

For at least these reasons, independent claim 1 complies with §112, first paragraph, as do dependent claims 3 and 5 which depend from claim 1.

Claim 3 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, claim 3 includes the limitation "wherein rendering said text with said halftone screen comprises...." According to the Office Action, this limitation of claim 3 does not appear to encompass the possibility that a halftone screen may not be implemented, as discussed above for claim 1. Claim 1 specifies "rendering said text with or without said halftone screen." Claim 3, then, simply address the situation where the text is rendered with the halftone screen. This is proper and legitimate claim construction and does not violate §112, second paragraph.

Claims 1 and 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2003/0058474 (hereinafter Loce) in view of *Print Quality Metrics for Grayscale Text* (hereinafter Farrell) and U.S. Patent 6,970,598 (hereinafter Nagarajan). Loce discloses a method and apparatus for use in an image forming device to select and apply halftone screens that are compatible with text components based on certain characteristics of the text. A text component characteristic recognizer ascertains characteristics of the text such as font specification, font size, predominant angle of the text, and whether the text is italicized or bold. This information is communicated to a halftone screen selector which selects a halftone screen based on one or more of the recognized characteristics. The selection of a halftone screen is accomplished using predetermined threshold values programmed into or stored within the

halftone screen selector. Loce does not disclose that a user may input or change the predetermined threshold value.

Farrell discloses a study to evaluate the relationship between subjective ratings of print quality and two types of machine vision metrics. The study involved subjective evaluation of print samples at various resolutions (dots per inch) and grayscale levels, and concluded that the smaller the edge jaggedness, the higher the perceived print quality. Also, the perceived print quality increased with increasing resolution and the introduction of grayscale filtering. Finally, the study found that there was no increase in perceived print quality with printer resolution and grayscale filtering and the measurement of edge sharpness.

Nagarajan discloses segmenting an image to be printed into one or more portions or segments that are independently processed for printing. For example, some segments may be predominantly text, while other segments may be images. Each segment may require different types of processing, or processing using different parameters, to maximize print quality. Nagarajan discloses allowing the user to change data processing settings for each segment. Nagarajan discloses four main segmentation classes: text and line art, photo/contone, coarse halftone, and fine halftone. Within each main segmentation class, the user is allowed to set rendering method, filtering, tone reproduction curve, and screen modulation parameters. Whichever parameter is set by the user, the selected parameter is applied to the entire segment. Nagarajan does not disclose any threshold values that would allow a parameter to be applied to a segment only when that threshold is exceeded.

Claim 1 includes, *inter alia*, receiving a page description language file including a text size value, providing a user-defined font sharpening threshold that is a separate value from the text size value, and overriding a previously established font sharpening threshold and substituting the user-defined font sharpening threshold. The Office Action repeats a basis for rejection from the July 26, 2007 Office Action that Loce discloses overriding a previously

established font sharpening threshold by inputting a font characteristic (specifically, the text size value). However, claim 1 as amended in the Response submitted on October 12, 2007 clearly states that the font sharpening threshold and the text size value **are two different values**. Applicant draws attention to the following statement from the Substance of Interview section of the Interview Summary mailed on August 31, 2007:

> "A user inputs a font characteristic (e.g., text size or point value) and the printer selects a halftone screen accordingly. Applicant argues the font size inputted by the computer and inputted according to the apparatus may be different. This theory is not supported in claim 1 given the broadest reasonable interpretation of claim 1 where a user inputs one font-sharpening threshold or text size and the halftone screen is chosen accordingly."

It is apparent from this statement that the Examiner did not believe that claim 1 as it read at the time of the interview adequately characterized the text size value and the font sharpening threshold as being two different values. Assuming *arguendo* that the above statement was an accurate interpretation of claim 1 as it stood at the time of the interview, the Examiner cannot possibly still hold to this argument when claim 1 has been amended to read "said user-specified font sharpening threshold being a separate value from said text size value." Therefore, specifying the text size value cannot override the font sharpening threshold, because they simply are not the same.

Further, claim 1 includes comparing the text size value to the font sharpening threshold. According to the logic of the Office Action, the text size value and the font sharpening threshold are the same. Following this logic, it would make absolutely no sense whatsoever to compare these two values. If they are the same, then nothing would ever come of such a comparison.

The office Action is in error stating that Nagarajan discloses substituting a user-defined font sharpening **threshold**, because Nagarajan has nothing to do with thresholds of any kind.

Nagarajan discloses selecting a variety of parameters to improve the print quality of selected segments of an image. These parameters include various halftone screens. However, the user simply selects the halftone screen that is best for the particular segment. No thresholds are involved in the selection process. The selected halftone screen is then applied to the entire segment. No threshold has to be reached before the selected halftone screen is implemented. Therefore, since Nagarajan does not disclose the use of thresholds, it cannot then be found to teach substituting a user-defined threshold as specified in claim 1.

For at least these reasons, independent claim 1 is not made obvious by Loce in view of Farrell and Nagarajan and is in condition for allowance.

Regarding claim 5, the Office Action states on page 7 that Loce discloses "objects to be printed..., said objects including [text] and said digital representation including **a text size value separate from said user-specified font sharpening threshold**" (emphasis added). However, page 6 of the Office Action states that "Loce fails to disclose or suggest providing a user-specified font sharpening threshold, said user specified font sharpening threshold being a separate value from said text size value." Therefore, by the Examiner's own admission, Loce does not disclose all of the limitations of claim 5 and this rejection must be withdrawn.

However, the Office Action may have intended to cite Nagarajan as disclosing this limitation similar to the rejection of claim 1. If so, then the rejection must still fail for the reasons stated above for claim 1. For at least these reasons, independent claim 5 is not made obvious by Loce in view of Farrell and Nagarajan and is in condition for allowance.
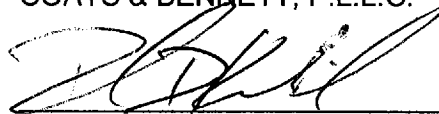
Claims 3, 6, and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Loce, Farrell, and Nagarajan, and further in view of U.S. Patent 7,079,287 (hereinafter Ng). Ng discloses methods for processing post rastor image processed gray level image data by subjecting the data to halftone screen processing, then analyzing each pixel of the halftone screen processed data to criterion to determine if the pixel is a saturated color image. Thus, Ng

does not cure the defects of the combination of Loce, Farrell, and Nagarajan as discussed above for independent claims 1 and 5. Therefore, dependent claim 3 is patentable for at least the reasons stated above for independent claim 1, and dependent claims 6 and 7 are patentable for at least the reasons stated above for independent claim 5.

In view of the above amendments and remarks, the Applicant submits that the present application is in condition for allowance and such action is respectfully requested. If any issues remain unresolved, the undersigned requests a telephone interview to expedite allowance and issuance.

Respectfully submitted,

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